INITIAL DEVELOPMENT OF A MULTIPLE INTELLIGENCE BASED TEACHING MODULE TO ENHANCE PRESCHOOL CHILDREN OF 4 YEARS OLD INTELLIGENCES.

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ABSTRACT: *Intelligence in preschool children should be observed in multiple ways as stated by Howard Gardner theory. The Malaysian Education Blueprint (MEB, 2013-2025) has been developed to underline the importance of preparing multiple skills children for the need of the 21st century. This quantitative study is to identify possible themes that are important and appropriate to support the development of the module. Themes from nationally and internationally books have been collected, compare and analysed to find out the pattern in the disbursement of the multiple intelligence components. Finally, selections of important and appropriate themes are chosen through survey and send to the preschool teachers. The result shows themes were perceived as importance and appropriate are selected to be included in the upcoming multiple intelligence based teaching module to enhance preschool children of 4 years old intelligences.*

Keywords: Multiple Intelligence, Preschool Children, Preschool, National Preschool Standard Curriculum

1. INTRODUCTION

Young children are unique learners who are gifted with talents, abilities and interest [6]. The National Association Education of Young Children's (NAEYC) guidelines has announced that teaching should be based on children needs, desires and individual learning style and abilities [7]. Historically, the No Child Left Behind (NCLB) programme in the United States has been designed to improve student achievement through exam based [3, 13]. In Malaysia, the factors of selection of preschool are based on brand, private-run preschools, English medium and religion-based pre-schools [18]. Another factor in selecting preschool, is the ''Literacy and Numeracy'' exam (LINUS) which requires the children to sit for a test on literacy and numeracy before entering primary one. This encouraged parents to place their first priority to choose preschools that teach formally [10] and by subjects.

Developing holistic children has been one of the most importance aspirations of the Malaysia National Preschool Standard Curriculum (NPSC) [8] objective. As mentioned by our founder of early childhood education and care (ECCE), Chiam Heng Keng, the new education system requires a holistic preschool education system in order to develop preschool children to their fullest potential [14-15]. To support this, Gardner's multiple intelligence theory (MIT) works in parallel with the NPSC (2010) policy and our National Educational Philosophy requirements. Most importantly, the implementation of the MIT has previously aired the '' *Application of the Theory of Multiple Intelligences in Teaching and Learning''* module through '*'Myschoolnet''* website in classrooms [17]. Consequently, the Permata Negara curriculum has also adapted the same theory in teaching children of 0 to 4 years old in its curriculum [12].

One of the missions of the new education system in Malaysia is to prepare preschool children to develop holistically intellectually, spiritually, emotionally and physically [6]. Recently, the Asia - Pacific Regional Policy Forum on Early Childhood Care and Education (APFEC) 2016 emphasizing again on the innovations in pedagogy approaches and human resources development to improve the quality in ECCE in various settings [19] through various teaching methods. Despite of that, preschool children are still being educated in a formal way [10]. Thus this "formal pedagogic world" of teaching and learning do not allow the preschool children to develop holistically [4].

In the opinion of the researcher, there are many national books that are produced by our Ministry of Education (MOE) for government preschools as well as private preschools' have limitation in focusing on MI elements to enhance preschool children intelligences. Most of the materials attract language and mathematical intelligence children only and topics are based on subjects rather than interrelated learning [1, 16 - 17].

If the local preschool used international books that include MI elements, the content or themes may not fit to our culture. Many of the themes are suitable for western country only such as Halloween Night and Eater Egg, to name a few.

As such, a teaching module that comprises multiple intelligence in teaching and learning is desirable to ensure effective implementation of classroom instruction to cater for different mixtures of intelligence based on individual, talent and ability [16]. The teaching module contains appropriate and importance themes that is suitable to Malaysia culture and identity. The said teaching module should incorporates intelligence into daily lesson plan to help teachers maximize different mixtures of intelligence and have more even distribution of intelligence based on individual, talent and ability [16].

2. PURPOSE OF THE STUDY

The purposes of this study are to analyse commonly used themes and disbursement of the multiple intelligence components in national and international books of preschool children and lastly to ascertain the preschool teacher perceptions regarding the' importance'' and ''appropriateness'' of the selected themes to be included in the upcoming multiple intelligence based teaching module to enhance preschool children of 4 years old intelligences

3. RESEARCH QUESTIONS

1. What are the commonly used themes included in text and activity books for preschool children nationally and internationally?
2. How is the disbursement of the multiple intelligence components in preschool text and activity books, nationally and internationally?
3. What is the preschool teacher perception regarding the ''importance'' and ''appropriateness'' of the selected themes to be included in the upcoming multiple intelligence based teaching module to enhance preschool children of 4 years old intelligences?

4.   METHODOLOGY
(i)   Participants
Data from this study were collected from 240 preschool teachers teaching in private and government sectors preschool in the district of Shah Alam, Selangor. These preschool teachers mainly are female and their experience varied from beginners to experienced preschool teachers.

(ii)   Data Collection procedures
This study examined the ''importance'' and ''appropriateness'' themes to be included in the upcoming multiple intelligence based teaching module to enhance preschool children of 4 years old intelligences. The first data for the themes were collected from 40 text and activity books, nationally and internationally, from parents, private and government sector preschools. Firstly, the researcher analyzed the 40 text and activity books and recorded 73 themes altogether. However, the researcher found out that the meaning of some of the themes is overlapping. To further study on the themes, letters of invitation were sent to 5 experienced preschool teachers, teaching between 8 - 10 years in Shah Alam, to assist on this ''filtering themes processes. The preschool teachers' duties are to combine the overlapping themes into one main theme based on their teaching experience. For example, themes of ''myself'', ''me'' and ''hello'' can be combined into one theme as ''My Self''. Once the filtering processes completed, selected themes are sent personally or through email using surveys to 120 preschool teachers teaching in private and government preschools sector to find out about their perception regarding the ''importance'' and ''appropriateness'' of the themes respectively.

5.   DATA ANALYSIS
Data were analyzed using the following methods:
(i) Document analysis techniques were used to analyze and filter the overlapping themes in the ''filtering themes process''.   At the end of the process, the result showed a total of 30 final themes chosen altogether.
(ii) Content analysis techniques were used to analyze the disbursement of multiple intelligence components in national and international books and activity.
(iii)Survey Forms indicating the ''importance'' and ''appropriateness'' of the selected themes have been sent personally and through emails to 120 preschool teachers in Shah Alam, Selangor, Malaysia respectively.

6.   FINDINGS
Research Question 1:
What are the commonly used themes included in text and activity books for preschool children nationally and internationally?
Researcher obtained 73 themes altogether from 40 text and activity books, nationally and internationally. However, after the ''filtering themes processes'', 30 themes were extracted and the result are as per table 1 below.

Table 1: Detail of the ''filtering themes processes'', total of 30 themes extracted out of 73 themes

No	Main Themes	Overlapping Themes Fit to one Main Theme
1	Safety	1.Environment 2. Kurikulum Permata Moral 2
2	My Family	1.Birthday 2.Mother'sDay 3. Father's Day 4. Bedtime 5. Kurikulum Permata Moral 1
3	Health	1. Hygiene 2. Food
4	Myself	1. Greetings 2. Hello 3. Me
5	Festival	1. Christmas 2. Halloween 3. Easter
6	School	1. My Classroom 2. Friends
7	Animals	1. Zoo 2. Farm 3. Pets
8	Holiday	Nil
9	Community	1. People 2. KSPK Module
10	Time and Calendar	1. Days 2. Weather
11	Technology	Nil
12	Transport	Nil
13	Occupation	Nil
14	Plants	1. Flowers 2. Vegetables 3. Fruits
15	Body	1. Sense
16	Clothes	1. Dressing up
17	Classification	1. Shape 2. Colour
18	Things	1. Living things 2. Non-living things
19	Material World	Nil
20	Measurement	Nil
21	Activities	1. Picnic 2. Shopping 3. Holiday 4. Park
22	Pre-writing	1. Alphabets 2. Numbers
23	House	1. Rooms
24	Come and play	1. Toys
25	Country	1. Town
26	Carnival	1. Circus
27	Jungle	Nil
28	Ocean	Nil
29	Emotion	Nil
30	Orientation	Nil

**Table 2: Selected themes were calculated to find the Mean(M) and Standard Deviation (SD)**

NO	THEMES	MPORTANCE		APPROPRIATE	
		MEAN	SD	MEAN	SD
1.	Safety	4.82	0.35	4.79	0.48
2.	My Family	4.83	0.33	4.85	0.36
3.	Health	4.79	0.38	4.81	0.44

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4.	**My Self**	**4.31**	**0.49**	**4.63**	**0.54**
5.	**Festivals**	**3.84**	**0.60**	**3.66**	**1.07**
6.	**School**	**4.23**	**0.53**	**4.31**	**0.74**
7.	**Animals**	**4.04**	**0.58**	**3.93**	**0.83**
8.	Holidays	3.08	0.62	3.32	1.01
9.	Community	3.92	0.77	3.36	1.19
10.	Time & Calendar	3.99	0.73	3.38	1.12
11.	Technology	3.88	0.74	3.13	1.07
12.	**Transport**	**3.99**	**0.63**	**3.54**	**0.99**
13.	**Occupation**	**3.95**	**0.68**	**4.04**	**1.15**
14.	Plants	4.03	0.65	3.42	1.11
15.	Body	4.21	0.62	3.18	0.99
16.	Clothes	3.91	0.73	3.28	1.21
17.	Classification	3.89	0.71	3.00	1.30
18.	Things	3.81	0.77	3.04	0.99
19.	Materials	3.23	0.80	3.00	1.17
20.	Measurement	3.27	0.84	3.04	1.28
21.	Activities	3.48	0.80	3.90	0.97
22.	**Pre-Writing**	**3.63**	**0.90**	**3.87**	**0.93**
23.	House	3.48	0.81	3.63	1.00
24.	**Come & Play**	**3.55**	**0.82**	**3.81**	**1.29**
25.	Country	3.31	0.90	3.03	1.30
26.	Carnival	3.16	0.74	2.94	1.20
27.	Jungle	3.30	0.78	3.07	1.38
28.	Ocean	3.30	0.77	3.02	1.38
29.	**Emotion**	**3.63**	**0.94**	**3.69**	**1.27**
30.	Orientation	3.48	0.88	2.74	1.59

Research Question 2:

How is the disbursement of the multiple intelligence components in preschool text and activity books, nationally and internationally?

Data in figure 1 and 2 below show on the disbursement of the multiple intelligence components in each of the selected preschool text and activity books, nationally and internationally. Total of 8 and 32 text and activity books nationally and internationally respectively were selected in this study to analyze for multiple intelligence components included.
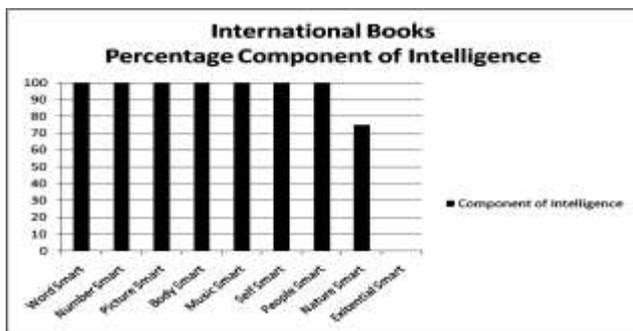
Figure 1: Disbursement component of MI in total of 8 international text or activity books
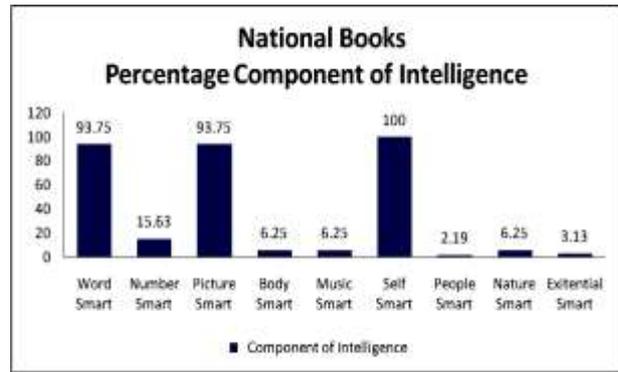
Figure 2 : Disbursement component of MI in total of 32 national text and activity books

Research Question 3:

What is the preschool teacher perception regarding the ''importance'' and ''appropriateness'' of the selected themes to be included in the upcoming MI-based teaching module?

All the 240 surveys were returned personally or responded through email. The results of the surveys were calculated to find out the Mean (M) and Standard Deviation (SD) as per table 2 below.

The result indicates that theme that score mean 3.5 and above for both ''important'' and ''appropriateness'', shall be accepted to be included in the upcoming multiple intelligence based teaching module, and theme that score mean below 3.5 will be omitted. Findings reveal that 12 themes chosen by 120 preschool teachers based on the ''importance'' and '' appropriateness'' respectively have been selected as the main themes to be included in the upcoming MI-based teaching module to enhance preschool children of 4 years old intelligences.

7. DISCUSSION

The result shows that themes appear in many forms of names with similar content, however, most of the themes chosen are based on the preschool children interest selected by the preschool teachers. The distribution of intelligence in national books is uneven with high components of word smart, picture smart and self-smart intelligence. This is because most of the text and activity books contain language composition in reading and writing that require children to complete on their own (self-smart). The high component of picture smart includes only colouring activities and does not exposed to other exposure in art such as reading images, drawing three-dimensional form or doodling. On the other hand, number smart is the fourth highest because maths is taught as a subject instead of integrating the lesson with other domains. However, the MI components in international books are well distributed except for existential smart, component, a concern with life issues. This mainly due to newly introduced intelligence by Gardner and as such it still far from fulfilling the entire criteria. The selected themes show that ''My Family'' has been the favourite choice of the preschool teachers for both ''importance'' and ''appropriateness'' mainly because it includes activities related to families. According to Bronfenbrenner (1979) theory, the micro system is most influential and therefore has the closest relationship to the person, and is the one where direct contact occurs. Health and Safety are among the favourite themes chosen by the preschool teachers maybe due to the importance of the two factors in dealing with children of four(4) years old.

8.   CONCLUSION

Intelligence influence education and its methodologies therefore present education system should engage preschool children with activities that improved hand-eyes coordination, gross & fine motor skills, social and emotional development, physical and natural exposure as well as spiritual element. This exiting learning can be introduced through thematically based along with MI approach that addresses all of the multiple ways of preschool children intelligence.

However, national text books that are published yearly contain the same content of learning and are subjects based. By focusing on individual subject, we fail to incorporate interrelated learning among preschool children thus create uneven distribution of intelligence. Providing quality materials allowed preschool children to profit from their educational settings (APFEC, 2016). As mentioned by Noorjahan Sultan in The New Sunday Times 'the transformation of a child is due to knowledge' that we inculcate in them [19]. Since Gardner's MIT represents as the most effective theory to cater for preschool educational and instructional methodologies, developing a culturally fit teaching module that support the said theory will help to cater for preschool children with myriad individual differences. Each theme need to be carefully impose the nine intelligences, however, each single lesson must not accommodate all intelligences but maintaining between three to five intelligence into one lesson plan along with the main objective of the lesson [16].

In class, children spend their learning through nontraditional ways particularly doing project-centered instruction which required them to observe in depth on certain area. Regardless how effective a classroom instruction takes place; there will be children who fail to abide the classroom routines, rules and procedures. MI approach has promised that no one discipline is suitable for all, therefore teachers need to match different discipline approaches to different children.

Lastly, multiple intelligence concepts allow children to take up their own preferred learning style either through visual, auditory or kinaesthetic to explore the world around them. In addition, MIT effects children behaviour in the classroom only by setting an environment where each child needs and talents are noticed and recognized by the teachers.

By implementing the theory into the daily curriculum that engage all of the intelligences answered the aspiration of the country as suggested in the present Malaysian Education Blueprint (2013) and the latest national standard preschool curriculum (2017) to develop preschool children according to their talent, ability and interest using higher order thinking (HOTs).

9.   REFERENCES

[1] Al-Omari, T., Bataineh, R., & Smadi, O. Potential Inclusion of Multiple Intelligences in Jordanian EFL Textbooks : A Content Analysis. *Bellaterra Journal of Teaching & Learning Language & Literature*, **8**(1), 60–80(2015).

[2] Bronfrenbrenner U, The Ecology of Human Development: Experiments by Nature and Design. Havard University Press, Cambridge, Massachussets(1979)

[3] Dee, T. S., & Jacob, B. A. (n.d.). The Impact of No Child Left Behind on Students, Teachers, and Schools.

[4] Huitt, W. No Title. *A Holistic View of Education and Schooling: Guiding Students to Develop Capacities, Acquire Virtues, and Provide Service*. Retrieved from http://www.edpsycinteractive.org/papers/holistic-view-of -schooling-rev.pdf (2011)

[5] McKenzie, W. *Multiple Intelligences and Instructional Technology.pdf*. (S. Harter, T. Cozzens, & L. Ertle, Eds.) (Second Edi). Washington DC: Jean Marie Hall (2005).

[6] Ministry of Education. *Malaysia Education Blueprint 2015-2025* (2015).

[7] NAEYC Governing Board. NAEYC standards for early childhood professional preparation: Advanced programs. *Position Statement*, (July), 1–103. Retrieved from http://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:NAEYC+Standards+for+Early+Childhood+Professional+Preparation+Programs#5 (2009).

[8] National Preschool Standard Curriculum Ministry of Education (2010).

[9] Natsiopoulou, T., & Vitoulis, M. Criteria of Parents for Choosing Preschool Centers during the Period of Economic Crisis in Greece. *International Journal of Caring Science*, **8**(3), 698–708 (2015).

[10] Norsuhaily Abu Bakar, Normadiah Daud, Nadhirah Nordin, & Abdul Hakim Abdullah. Developing integrated pedagogical approaches in play pedagogy : Malaysian experiences. *Asian Social Science*, **11**(4), 234–245   (2015). http://doi.org/10.5539/ass.v11n4p234

[11] Özar, M. Curriculum of preschool education : Swedish approach. *International Journal of Business and Social Science*, **3**(22), 248–257 (2012).

[12] Permata Negara Curriculum (2013)

[13] Phillips, H. Multiple Intelligences : Theory and Application. *A Journal of the College of Education & Health Professions*, **11**(1), 4–11 (2010).

[14] Profeta, M. Promoting Holistic Learning and Development in Early Years : An Analysis of Quality in Early Childhood Care and Education (ECCE) from the Asia-Pacific Region, (October), 1–70 (2012).

[15] Sim, O. M. No Title. *The Star On Line*, pp. 1 – 3. (2016).

[16] Sulaiman, T., Sulaiman, S., & Suan, W. H. Integrating Multiple Intelligences and Technology into Classroom Instruction to Transform Instructional Practice in Malaysia. *Journal of Language Teaching and Research*, **2**(5), 1146–1155. http://doi.org/10.4304/jltr.2.5.1146-1155 (2011).

[17] Towonsing, A., & Habibah Lateh. European Journal of Educational Sciences Vol. 1, Issue 1, 2013 Mastery learning in Geography: is the main determiner for student success? *European Journal of Educational Sciences*, **1**(1), 1–13. (2013).

[18] Zainurin Dahari, & Mohd Sabri Ya. Factors that influence parents ' choice of pre-schools education in Malaysia : An exploratory study. *International Journal of Business and Social Science*, **2**(15), 115–128

[19] Zulita Mustafa. (2016). Teacher Extraordinaire. *New Sunday Times*, pp. 6 – 7 (2011).